

silica in these Phytolitharia, as well as in the Diatomaceæ, Polycystinæ and Spongiolites, is not doubly refractive. He makes an exception in the case of the shell of *Arachnoidiscus*, but my own experiments prove that when properly cleaned this shell forms no exception. As I have shown above that the silica in the cuticle of the *Equisetum* and Grasses agrees with that in the lower tribes in characters, I think the conclusion is warranted, that doubly refractive silica has no existence in the organic world.—*Silliman's American Journal for May 1856*, p. 357.

METEOROLOGICAL OBSERVATIONS FOR MAY 1856.

*Chiswick*.—May 1. Overcast : cold showers, partly hail : clear and cold. 2. Quite clear : cloudy : frosty at night. 3. Cloudy and cold : showery. 4. Overcast : cloudy : clear, with sharp frost at night. 5. Frosty early A.M. : cloudy and cold. 6. Fine : cloudy and cold : rain. 7. Cold rain. 8. Densely clouded : cold north wind. 9. Heavy clouds. 10. Uniformly overcast : fine. 11. Light haze : fine : cloudy. 12. Uniform haze : rain. 13. Rain : cloudy. 14. Heavy showers. 15. Fine : showers, with some hail. 16. Fine. 17. Cloudy. 18. Boisterous, with rain and hail. 19. Very fine. 20. Very fine : slight frost. 21. Fine : rain. 22. Rain. 23. Cloudy : fine. 24. Fine. 25. Cloudy : rain. 26. Fine. 27. Very fine : heavy rain at night. 28. Cloudy : very fine. 29. Hazy : cloudy : fine. 30. Cloudy and cold. 31. Rain.

Mean temperature of the month .....	50°·09
Mean temperature of May 1855 .....	48·78
Mean temperature of May for the last thirty years .....	53·55
Average amount of rain in May .....	1·852 inches.

*Boston*.—May 1. Cloudy : rain and sleet P.M. 2, 3. Cloudy : rain and hail P.M. 4, 5. Cloudy. 6. Cloudy : hail and snow A.M. 7. Cloudy. 8. Cloudy : rain A.M. 9, 10. Cloudy. 11. Fine. 12, 13. Cloudy. 14. Cloudy : rain with thunder P.M. 15, 16. Cloudy. 17. Cloudy : rain P.M. 18. Cloudy : rain A.M. and P.M. 19. Cloudy. 20, 21. Fine. 22. Rain A.M. and P.M. 23. Fine : rain and thunder P.M. 24. Cloudy : rain A.M. and P.M. 25, 26. Cloudy : rain P.M. 27. Fine : rain P.M. 28. Cloudy : rain A.M. and P.M. 29. Cloudy : 30. Fine. 31. Cloudy : rain P.M.

*Sandwick Manse, Orkney*.—May 1. Bright A.M. : cloudy P.M. 2. Sleet-showers A.M. : cloudy P.M. 3—5. Cloudy A.M. and P.M. 6. Cloudy A.M. : clear P.M. 7. Clear A.M. and P.M. 8. Cloudy A.M. : clear P.M. 9. Clear A.M. : rain P.M. 10. Cloudy A.M. : drops P.M. 11. Drizzle A.M. : fog P.M. 12. Hazy A.M. : clear, fine P.M. 13. Cloudy A.M. and P.M. 14. Cloudy A.M. : rain P.M. 15. Cloudy A.M. drops P.M. 16. Bright A.M. : cloudy P.M. 17. Clear, fine A.M. : cloudy, fine P.M. 18. Showers, bright A.M. : showers P.M. 19. Cloudy A.M. : showers P.M. 20. Bright A.M. : clear P.M. 21, 22. Bright A.M. : cloudy P.M. 23, 24. Cloudy A.M. and P.M. 25. Clear A.M. and P.M. 26, 27. Cloudy A.M. and P.M. 28. Bright A.M. : cloudy P.M. 29—31. Clear A.M. and P.M.

Mean temperature of May for previous twenty-nine years ...	47°·85
Mean temperature of this month .....	46·83
Mean temperature of May 1855 .....	43·81
Average quantity of rain in May for fifteen previous years ...	1·66 inches.

The great drought continues ; the rain during the last three months being less than the average for May alone, which is our driest month, and not half the quantity that fell in March alone last year.